Agricultural Extension Service ● University of Minnesota

FACT SHEET

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Making Cheese at Home

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Making cheese at home can be an interesting experience. It is one home project whose results can be consumed shortly after it is completed. Many soft cheeses are relatively easy to make and can be completed in one day. Only soft cheeses, those that don't need aging or curing, should be made in the home. Hard or cured cheeses require special conditions of temperature and humidity for curing. These are difficult to obtain and maintain in the average home.

One of the simplest soft cheeses to make is the Latin American cheese, Queso Blanco, or white cheese. The directions for making this cheese are given below. Once this technique is mastered, you can try to make other soft cheeses that are a little more difficult.

The cheesemaking process

Cheese is often called the heart of milk since it is the solids of the milk removed from the liquid. Cheesemaking is nothing more than a concentrating process. The curds are removed from the whey either by adding rennet, an enzyme from young calves' stomachs that precipitates the curd out of the milk, or by allowing certain bacteria to grow in the milk and produce lactic acid that will separate the curds from the whey. Many cheeses are made using various combinations of both methods.

As the cheesemaking process continues, each step removes more moisture from the curd. Essentially all types of cheese are made the same way. Variations in type are achieved by manipulating these steps.

Cheese must be made quickly and from pasteurized milk. Milk is a neutral, highly nutritious food and will allow almost any type of bacteria to grow. Speed and attention to cleanliness are important to prevent unnecessary problems from developing.

Equipment needed

1. Thermometer, preferably stainless steel dial type, temperature range 25° to 125°F.* A good sturdy thermometer is essential. Glass thermometers are usable, but be careful not to break the thermometer in the cheese.

2. Large double boiler, inner pot should have about 5 quart capacity for 1 gallon of milk. If you do not have a double boiler, use two large pots. The smaller should fit inside the larger.

3. Spatula, thin bladed, long enough to reach bottom of pot.

4. Long handled spoon.

5. Cheesecloth or muslin.

6. Hoops or forms for pressing the cheese. These can be made from one-pound coffee or shortening cans. Punch holes in the bottom of the can with an ice pick. Work from the inside out so the cloth liner does not catch on the holes. Make a follower out of the can lid in the same way. (See figure 1)

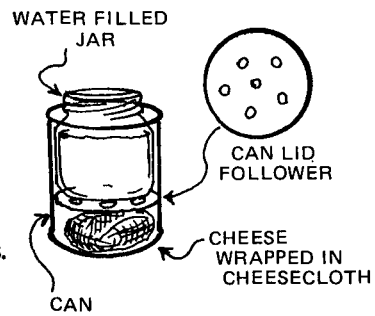


figure 1

7. A press or device to put pressure on the cheese. This can be done by using other cans or glass jars that will fit snugly in the hoops. When filled with water, these will exert pressure on the cheese.

Materials needed

1. One gallon pasteurized milk, 2 percent or regular. Pasteurized, homogenized milk may be used but will give a weaker curd structure.

2. Rennet tablets. Usually these can be obtained from the drugstore.

3. Half a cup of fresh unsalted buttermilk or ¼ cup of fresh plain yogurt.

4. Salt, 3 teaspoons per gallon of milk.

Making the cheese

1. Use the double boiler or two pans. Put water into lower unit and 1 gallon of pasteurized milk in the upper unit. Stir in ½ cup fresh unsalted butter-

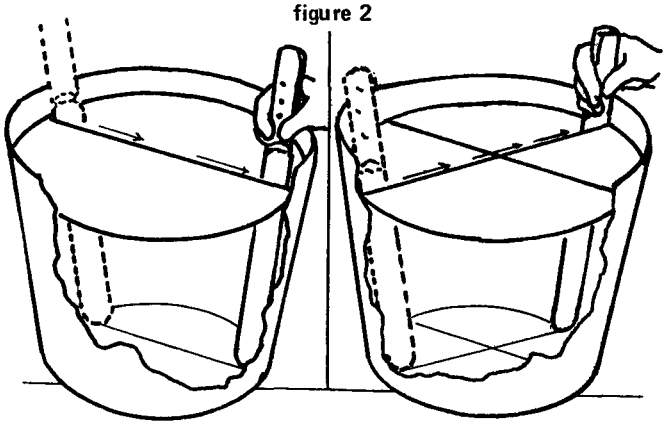
*Available from: Weston Instruments, Inc., 614 Frelinghuysen Avenue, Newark, New Jersey 07114. Model 2292, cost approximately $12.

milk or ¼ cup fresh plain yogurt. Stir and warm slowly to 92-94°F. Maintain this temperature through steps 2 and 3.

2. Add rennet following directions given by manufacturer. Dissolve tablet in cold water and stir into milk for 2 or 3 minutes. Allow milk to set undisturbed for about 30 minutes until a firm gel forms. Test gel firmness by inserting spatula into curd and pulling it out at an angle. If curd breaks clean, it is ready for cutting.

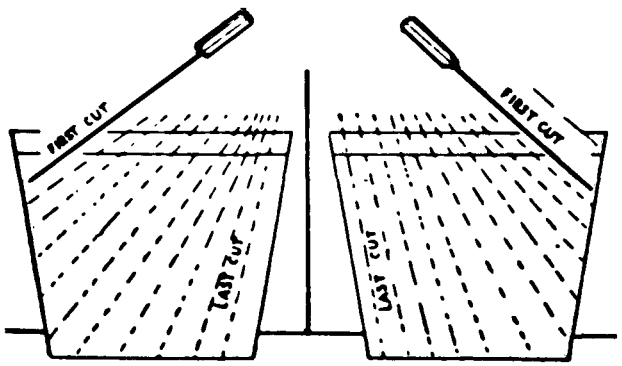
3. Cut the gel with the spatula into one-inch cubes. (See figure 2) Stir gently for 20 to 30 minutes until the curd heals or becomes firmer. Maintain temperature at 92-94°F.

figure 2



POSITION 1 POSITION 2

FOLLOW YOUR ORIGINAL CUTS AS NEARLY AS POSSIBLE; HOLDING KNIFE AT ANGLE AS IN POSITION NUMBER 3— THEN AS IN POSITION 4.



POSITION 3 POSITION 4

4. Pour off or dip out the whey (yellow liquid). Allow the curd to settle and dip out whey with cup. Push curd to one side of pot and tilt to drain off remaining whey.

5. Add salt. Amount of salt added may be varied to suit individual tastes. Mix 3 teaspoons of salt into the curd in three portions, 5 minutes apart (1 teaspoon, three times).

6. Divide the salted curd into two equal piles. Line two hoops (the prepared, clean cans) with clean, wet cheesecloth or muslin. Place the salted curd into the lined cans—one pile into each can. Fold cloth over the top and add can lid follower.

7. Apply pressure by adding weight to the top of the curd in the can. Continue pressing until cheese surface is smooth usually 2 to 4 hours. Do this in the sink as considerable liquid will drain out.

8. When pressed sufficiently, remove from cans. Remove cloth and wrap in waxed paper or plastic wrap.

9. Cheese can be used immediately. Under proper refrigeration (40-45°F.) cheese will keep for 7 to 10 days. It can be eaten alone, with fruit or as cottage cheese might be used.

Hints for cheesemaking

1. Keep everything clean, including your hands. Do not make cheese if you have an infected cut, boil, pimple, or other skin infection.

2. Use only pasteurized milk. Pasteurized, homogenized milk gives a weaker curd than milk that has not been homogenized, but the latter is difficult to find.

Milk contains only 10 percent solids. To obtain one pound of cheese, you need 10 pounds of milk. One gallon of milk weighs 8.4 pounds and will make about 1 pound of soft cheese. If you progress to hard cheese such as Colby and cheddar, you will get less cheese from the same amount of milk.

3. Use fresh buttermilk or yogurt each time.

4. Experiment a little until you develop the procedure that makes the type of cheese you like

5. Aged cheeses will mold readily if not handled properly.

6. Good active rennet is necessary to make good cheese. Make certain you completely dissolve the tablets in cold water just before you use them.

7. Work quickly. Do not let the milk set at a warm temperature any longer than is indicated in the procedure you are following.

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